



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF

MAR 10 2008

(AE-17J)

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Joseph A. Miller, Jr., General Manager
Duke Energy Corporation
W.H. Zimmer Generating Station
1781 U.S. Route 52
Moscow, Ohio 45153-9705

Dear Mr. Miller:

This is to advise you that the U.S. Environmental Protection Agency has determined that Duke Energy Corporation (Duke Energy), owner and operator of the William H. Zimmer Generating Station in Moscow, Ohio, is in violation of the Clean Air Act (CAA) and associated state or local air pollution control requirements.

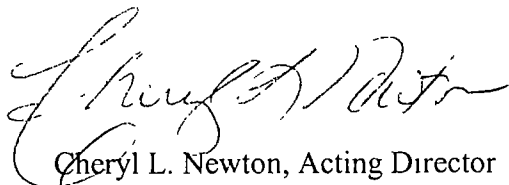
EPA is sending this Notice of Violation and Finding of Violation (NOV/FOV) to notify you that Duke Energy has violated the following CAA provisions: the Ohio State Implementation Plan (including regulations for the Prevention of Significant Deterioration); New Source Performance Standards; and Title V.

Section 113 of the CAA gives us several enforcement options to resolve these violations, including: issuing an administrative compliance order, issuing an administrative penalty order, bringing a judicial civil action, and bringing a judicial criminal action.

We are offering you the opportunity to request a conference with us about the violations alleged in the NOV/FOV. A conference should be requested within 10 days following receipt of this notice. A conference should be held within 30 days following receipt of this notice. This conference will provide you a chance to present information on the identified violations, any efforts you have taken to comply, and the steps you will take to prevent future violations. Please plan for your facility's technical and management personnel to take part in these discussions. You may have an attorney represent and accompany you at this conference.

If you wish to request a conference, please contact Ethan Chatfield of my staff at 312-886-5112.
EPA hopes that this NOV/FOV will encourage Duke Energy to achieve and maintain compliance with the requirements of the CAA

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Cheryl L. Newton".

Cheryl L. Newton, Acting Director
Air and Radiation Division

Enclosure

cc: Robert Hodanbosi, Chief
Division of Air Pollution Control
Ohio Environmental Protection Agency

Brad Miller, Supervisor
Permits and Enforcement Section
Hamilton County Department of Environmental Services

1. The permits, permit conditions, and regulatory conditions relevant to this NOV/FOV are as follows:
 - a. Under OAC Rule 3745-31, on February 5, 1987 (modified April 1, 1992), the Ohio Environmental Protection Agency (OEPA) issued Permit to Install (PTI) 14-1036 for an “Electric Power Generation Facility w/1,300 MW Coal-fired Boiler w/ESP and FGD and 2 Auxiliary Boilers and Associated Material Handling”. The PTI contained the following provisions:
 - i. Source Identification: 11,968 mmBtu/hr coal fired boiler, Zimmer Unit 1
 - ii. Sulfur dioxide emission rate for Boiler B006 (page 4): 0.548 lb/mmBtu, 9 percent of potential emissions, 28,726 tons/year.

- iii. Opacity emission limitation for Unit B006 (page 4): Opacity emissions shall not exceed 20 percent as a six-minute average, except for one six-minute period per hour of not more than 27 percent.
 - iv. Opacity emissions limitation for Units B007 and B008 (page 5): Opacity emissions shall not exceed 20 percent as a six-minute average.
 - v. Malfunction/Abatement (page 9/10): "In accordance with OAC Rule 3745-15-06, any malfunction of the sources or associated air pollution control system(s) shall be reported immediately to the Southwestern Ohio Air Pollution Control Agency "
 - vi. Best Available Control Technology (BACT) Determination for Boiler B006 (page 10): A short-term BACT SO₂ emission limit of 1.0 lb/mmBtu, 3-hour average, shall be applicable to B006.
- b. Under OAC rule 3745-77, on November 18, 2004, OEPA issued Final Title V Permit No. 14-13-09-0154, to Cincinnati Gas & Electric Co., the former owner and operator of the Zimmer Station. The Title V permit contained the following provisions:
- i. Deviation Reporting, Part I, Condition A.1.c.ii (page 2): "Written reports of any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, the probable cause of such deviations, and any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency."
 - ii. Unit 1 (B006) Part III, Condition A.I.2.b (page 30): Sulfur dioxide emissions shall not exceed 1.0 lb/mmBtu as a 3-hour average.
 - iii. Unit 1 (B006) Part III, Condition A.I.2.c (page 30): Visible particulate emissions shall not exceed 20 percent opacity, as a 6-minute average, except for one 6-minute period per hour of not more than 27 percent opacity.
 - iv. Unit 1 (B006) Part III, Condition A.I.2.c (page 30): Sulfur dioxide emissions shall not exceed 0.548 lb/mmBtu actual heat input, 28,726 tons/year, and 9 percent of the potential sulfur dioxide emissions (91 percent reduction of the sulfur dioxide emissions).
 - v. Unit 1 (B006) Part III, Condition A.I.1 (page 29): Applicable emission limitation for visible particulate is 20 percent opacity as a 6-minute average except for one 6-minute period per hour of not more than 27 percent opacity.
 - vi. Auxiliary Boilers A and B, (B007 and B008) Part III, Condition A.I.1 and 2b (pages 42 and 51): Visible particulate emissions shall not exceed 20% opacity as a 6-minute average.

- c. The NSPS at 40 C.F.R. § 60.42Da(b) states that no owner or operator shall discharge into the atmosphere any gases which exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.
- d. The Title V regulations at 40 C.F.R. § 70.7(b) state that no source subject to Title V may operate the source except in compliance with a Title V permit.
- e. The PSD regulations at 40 C.F.R. § 52.21(a)(2)(iv) state that no major modification to which the requirements of 52.21 (j) through (r)(5) of this section apply shall begin actual construction without a permit that states that the major modification will meet those requirements.
- f. Under 40 C.F.R. § 52.21(b)(2)(i), “major modification” means any physical change or change in the method of operation that would result in a significant emissions increase of a regulated NSR pollutant.
- g. Under 40 C.F.R. § 52.21(b)(2)(50), a “regulated NSR pollutant” means any pollutant that is subject to any standard promulgated under Section 111 of the Act.
- h. Under 40 C.F.R. § 52.21(b)(23)(i), “significant” means for sulfuric acid mist, a rate of emissions that would equal or exceed 7 tons per year.
- i. Under 40 C.F.R. § 52.21(j)(2), a new major stationary source must apply best available control technology for each regulated NSR pollutant that it would have the potential to emit in significant amounts.
- j. Under 40 C.F.R. § 52.21(n), the owner or operator of a proposed source shall submit all information necessary to perform any analysis or make any determination required under this section. Such information shall include: A description of the nature, location, design capacity, and typical operating schedule of the source or modification.
- k. Section 113(a)(1)-(3) of the CAA, 42 U.S.C. § 7413(a)(1)-(3), authorizes the Administrator to initiate an enforcement action whenever, on the basis of any available information, the Administrator finds that any person has violated or is in violation of a requirement or prohibition of, among others, any implementation plan or permit, Title I or Title V of the CAA, or any rule promulgated, issued, or approved under Title I or Title V of the CAA.

Explanation of Violations

- 2. Based on review of continuous emission monitoring (CEM) data submitted to EPA, we have determined that Unit B006 has violated the sulfur dioxide (SO₂) emission limits cited in Paragraph 1a, above, as follows:

- a. In calendar year 1996, Unit B006 exceeded its 28,726 tons of SO₂ per year limit by 622 tons.
- b. During the period from January 2002 to September 2007, Unit B006 exceeded its short-term 1.0 pound of SO₂ per million British thermal units (mmBtu) BACT, 3-hour average emission limit, for a total of 662 hours, exceeding the limit by over 1,200 tons. The number of hours B006 was in violation of the applicable limit, per quarter, is provided in Table 1, below.

Table 1: Hours in Violation of Sulfur Dioxide Limit for Boiler B006:

Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2002	26	18	37	32
2003	17	87	52	20
2004	31	-	18	31
2005	30	11	31	14
2006	43	34	22	34
2007	22	22	30	-

- c. During the period from January 2002 to December 2006, Unit B006 exceeded its 0.548 pounds of SO₂ per mmBtu limit, a total of 738 days (based on a 30-day rolling average basis). The number of days B006 was in violation of this limit, per quarter, is provided in Table 2, below.

Table 2: Days in Violation of Sulfur Dioxide Limit for Boiler B006:

Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2002	-	-	30	65
2003	-	81	78	14
2004	47	5	33	77
2005	40	19	-	-
2006	91	57	59	42

3. Duke Energy failed to provide written notification of the SO₂ violations identified in Paragraph 2, above, as required by the Title V permit and PTI 14-1036.
4. Based upon review of Quarterly Excess Emission Reports submitted by Duke Energy for the Zimmer Station for 1st Quarter 2002 to 3rd Quarter 2007, the facility reported a total of 3,076 minutes of 20 percent, 6-minute average opacity violations for B006, 3,408 minutes of violations for B007, and 2,646 minutes of violations for B008. The number of minutes these units were in violation of the applicable opacity limit, per quarter, is provided in Table 3, below.

Table 3: Opacity Violations for Boiler B006, B007, and B008:

	B006	B007	B008
2002: 1 st Quarter	-	-	12
2 nd Quarter	6	120	6
3 rd Quarter	336	66	18

4 th Quarter	42	12	18
2003: 1 st Quarter	-	-	12
2 nd Quarter	60	390	330
3 rd Quarter	24	36	96
4 th Quarter	96	258	240
2004: 1 st Quarter	600	102	168
2 nd Quarter	24	-	-
3 rd Quarter	42	84	138
4 th Quarter	270	144	42
2005: 1 st Quarter	172	216	84
2 nd Quarter	72	270	186
3 rd Quarter	54	354	246
4 th Quarter	240	156	90
2006: 1 st Quarter	54	312	306
2 nd Quarter	324	282	180
3 rd Quarter	42	156	66
4 th Quarter	84	120	186
2007: 1 st Quarter	102	222	156
2 nd Quarter	24	60	12
3 rd Quarter	408	48	54

5. Based on review of continuous emission monitoring (CEM) data submitted to EPA, we have determined that during the period from January 2002 to September 2007 Unit B006 violated the 11,968 mmBtu per hour heat input limitation stated on page 3 of PTI 14-1036 a total of 7,296 hours (17% of the total operating hours).

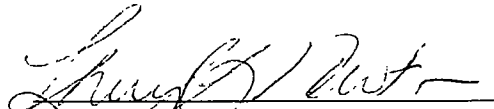
Table 4: Hours in violation of mmBtu/hr limitation for Boiler B006:

Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2002	620	306	330	652
2003	695	520	791	16
2004	313	1525	466	3
2005	-	5	278	253
2006	209	13	43	21
2007	28	45	164	-

6. Duke Energy, by understating the actual maximum design capacity in its PTI, did not provide all of the necessary information for which the Ohio Environmental Protection Agency, as the permitting authority, needed to make the analysis and determinations, in violation of 40 C.F.R. § 52.21(n).
7. On May 24th, 2004, Duke Energy installed and began operating a Selective Catalytic Reduction (SCR) system. Installation of this system resulted in an emissions increase of sulfuric acid mist, a regulated NSR pollutant, of greater than 7 tons/year, in excess of the significance levels of 40 C.F.R. § 52.21(b)(23)(i). Duke Energy did not obtain a PSD permit

prior to installation of the SCR system nor did it install BACT, in violation of 40 C F R. § 52.21(a)(2)(ii) and 40 C F.R. § 52.21(j)(2), respectively

3/10/08
Date


Cheryl L. Newton, Acting Director
Air and Radiation Division

CERTIFICATE OF MAILING

I, Betty Williams, certify that I sent a Notice of Violation and Finding of Violation by
Certified Mail, Return Receipt Requested, to:


Joseph A. Miller, Jr., General Manager
Duke Energy Corporation
W.H. Zimmer Generating Station
1781 U.S. Route 52
Moscow, Ohio 45153-9705

I also certify that I sent a copy of the Notice of Violation and Finding of Violation by First
Class Mail to:

Robert Hodanbosi, Chief
Division of Air Pollution Control
Ohio Environmental Protection Agency
1800 WaterMark Drive
Columbus, Ohio 43215

Brad Miller, Supervisor
Permits and Enforcement Section
Hamilton County Department of Environmental Services
250 William Howard Taft Road
Cincinnati, Ohio, 45219-2660

on the 11th day of March 2008.


Betty Williams, Secretary
AECAS(IL/IN)

Certified Mail Receipt Number: 70010320 00058920 1132